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PILOT RETENTION IN THE MILITARY: AN ANALYSIS OF ALTERNATIVE BONUS PLANS

STAFF WORKING PAPER

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PREFACE

In response to current and projected pilot shortages in the Navy and Air Force, the Administration has proposed a new Aviator Continuation Pay (ACP) program that would pay cash bonuses to eligible pilots who remain on active duty after meeting their initial service commitments. The Navy and the Air Force plan to implement their programs in slightly different ways, however: the Navy would pay a bonus only to certain aviators in those communities that are currently experiencing shortages, while the Air Force plans to pay equal bonuses to all eligible pilots, regardless of whether current shortages exist for their particular communities. In its review of the Administration's proposal, the House of Representatives included language requiring the Air Force to target its bonus payments in a manner similar to the Navy.

This analysis by the Congressional Budget Office (CBO) examines the costs of the House plan and the Administration proposal as well as the advantages and disadvantages of each. The analysis was requested by the Subcommittee on Military Personnel and Compensation of the House Committee on Armed Services. In accordance with CBO's mandate to provide objective analysis, the paper makes no recommendations.

Marvin M. Smith of CBO's National Security Division prepared the paper under the general supervision of Robert Hale and Neil Singer. The author gratefully acknowledges the assistance of Amy Plapp, William Kostak, and Elizabeth Chambers. Francis Pierce edited the manuscript and Rebecca Kees prepared it for publication.

James L. Blum
Acting Director

June 1988

INTRODUCTION AND SUMMARY

During the middle and late 1970s there was a high demand for pilots in the commercial sector. Since the military was the source of more than 60 percent of the commercial pilots hired by the major airlines at the time, the armed services experienced a dramatic increase in the rate of pilot departures. While all of the services were adversely affected, the impact was particularly severe on the aviation officer community in the Navy and, to a lesser degree, in the Air Force. By 1980, the Navy had a shortage of about 2,000 pilots. The Air Force, with a larger pilot community, faced a shortfall of slightly over 1,000.

These shortages decreased during the 1980s, for several reasons. A slowdown in hiring of pilots in the civilian sector helped all of the military services retain trained pilots. In addition, the Navy opted to pay aviators a cash bonus under the Aviation Officer Continuation Pay (AOCP) program discussed below.

Nonetheless, the shortfall in Navy pilots has persisted and is projected to total 1,200 in the lieutenant and lieutenant commander ranks in 1989. While the Air Force's shortfall is not as large as the Navy's--the service anticipates no shortfall in 1988 and an overall shortfall of 225 pilots in 1989--its longer-range projections suggest a shortage of 2,000 pilots by 1992.

The Issue

In response to the current shortage of aviators in the Navy and the projected shortfall of pilots in the Air Force, the Administration has proposed a new Aviator Continuation Pay (ACP) program. ACP would provide annual cash bonuses of up to $12,000 to certain pilots who choose to remain on active duty beyond the minimum of years they are required to serve after receiving flight training.

Under the program, the Secretaries of the Navy and Air Force would determine the criteria for payment of ACP, subject of course to approval by the Secretary of

Defense and appropriation of funds by the Congress. Both the Navy and the Air Force have said they would pay bonuses only to pilots at "retention-sensitive" points in their careers. The services say these would include pilots with from 6 to 14 years of military service. Though their methods would differ, both services would also base the size of the bonus on the number of years remaining until completion of 14 years of service, with larger bonuses going to those who signed on for longer periods.

In other important respects, however, the Navy and Air Force would use different criteria for determining who received the new ACP bonus. The Navy would target its payments to specific aviators. First, it would pay the bonus only to aviators operating types of weapons systems (for example, fighters) that were experiencing shortages of pilots. Second, within each shortage category, the bonus payment would be based on the severity of the shortage. Thus, the category with the greatest shortage would receive the maximum payment, that with the next largest shortage somewhat less, and so forth.

The Air Force, on the other hand, plans to use less targeting. Navigators and helicopter pilots would be excluded from the ACP program, since these communities are not experiencing shortages. But ACP bonuses in the Air Force would be paid to all other pilots with from 8 to 14 years of service, regardless of whether a current shortage existed for their particular weapons system or type of aircraft.

In its review of this Air Force plan, the House of Representatives included language requiring that the Air Force pay ACP bonuses only to pilots operating weapons systems experiencing shortages. Criteria for payment of ACP bonuses would then be similar in the Navy and the Air Force.1/ This paper compares the costs of the Administration and House approaches, and analyzes their advantages and disadvantages.

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1. The Senate, on the other hand, accepted the language proposed by the services but reduced the funding level for the Air Force from $54 million to $30 million. No attempt was made in this study to analyze the Senate's position.

Summary of Results

The paper analyzes the costs of the House plan and the Administration proposal and also discusses the advantages and disadvantages of each. In addition, the paper presents background information about retention of pilots that may be useful in choosing between the proposals.

The scope of the analysis in this paper is limited. It examines only two of the many approaches that could be used to meet pilots' needs. Moreover, key data used in the analysis are based on service projections. In the time available, the Congressional Budget Office (CBO) has not attempted independent projections of the inventories of pilots likely to be available to meet future needs. Nor does this paper discuss the basis for estimating the numbers of pilots that will be required.

Air Force projections show that pilot shortages vary with the type of weapons system. In 1989, for example, only four of seven categories of weapons systems will experience any shortfall. For this reason, the House plan would be likely to result in fewer and smaller bonuses, and therefore cost less. CBO estimates that in 1989 the ACP program for the Air Force would cost $36.2 million under the House plan, compared to $54 million under the Administration proposal.2/

The Air Force argues against the House plan mainly on the basis of equity, urging that all pilots whose lives would be threatened in a war should receive a bonus. On the other hand, there is extensive precedent in DoD pay systems for paying bonuses and special pays only where problems exist. Moreover, the House plan would establish the same criteria for Navy and Air Force bonuses.

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2. The budget contains $54 million to fund the Air Force's ACP program. However, the Air Force has recently estimated that the program will cost $57.9 million.

THE ANALYSIS

Pilots are expensive to train and their skills would be essential in wartime. Among the many factors influencing their decision to remain in the military are adequate pay and compensation, family considerations, and living and working conditions.

Current Flight Pays

Pilots, of course, receive normal military pay. In addition, two special pays are available to most pilots: aviation career incentive pay (ACIP) paid by all services, and aviation officer continuation pay (AOCP) available only in the Navy. Both are intended to enable the military to attract and retain officers in the field of aviation.

Aviation Career Incentive Pay. ACIP, which was established in 1974, is available to all eligible pilots in all services. Currently, it is $400 a month. To be eligible, a pilot must qualify at the appropriate "gates." These occur at the end of the 12th and 18th years of pilot or "rated" service (including time spent in flight training). By the 12th year of rated service, a pilot with at least six years of flying experience is eligible to receive ACIP until the 18th year of service. At the 18th year, a pilot with nine years of operational flying experience is eligible for pay through the 22nd year; and with eleven years, a pilot is eligible for ACIP through the 25th year of service. After the 25th year of service, only those pilots still flying can receive ACIP. The ACIP pay program would be unchanged under the Administration proposal for the new ACP bonus.

Aviation Officer Continuation Pay. AOCP is a special bonus available only in the Navy, and only to those operating weapons systems designated by the Secretary of the Navy. At present, naval aviators with less than seven years of active service who are eligible for AOCP bonuses may contract to continue on active duty for three, four, or six years. If the six-year option is

chosen, a pilot receives the maximum bonus of $36,000 ($6,000 a year). Those contracting for fewer years receive smaller bonuses. The Navy pays this bonus in annual increments, but also offers the option to some pilot communities of receiving it in one lump sum. Unlike the ACIP program, which would be unchanged by introduction of the new ACP bonus, the AOCP bonus program would be replaced by the ACP bonus.

Reasons for Leaving the Military

In evaluating the need for a new bonus program for pilots, it is useful to consider the reasons why pilots leave the military. Although many factors influence a pilot's decision, reasons for separating tend to fall into two general categories: the quality of military life, and the job opportunities in the civilian sector.1/

Quality of Life. Pilots give several reasons for dissatisfaction with military life. Some cite the rigors of duty, others the long periods spent away from their families. Such periods of family separation are particularly hard on Navy pilots stationed at sea. Other pilots feel that the career uncertainties associated with job assignments and promotion opportunities are reason enough to reconsider their nonmilitary options. Still others complain of the lack of quality flying when they are not deployed.2/ Any comprehensive approach to alleviating the pilot shortage problem should address these and other quality-of-life issues that have a bearing on pilot retention.

Civilian Job Opportunities. The services acknowledge that a major reason for leaving the military is the lure of civilian job opportunities. Until the Vietnam War, the military supplied more than 60 percent of the commercial pilots for major airlines. Now, in part

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1. The following material is derived, in part, from Air Force and Navy briefings.

2. Quality flying generally refers to flying primary missions in the specific aircraft in which a pilot was trained.

because of initiatives by the military, the figure has fallen to about 30 percent.3/ Nonetheless, the airlines' demand for pilots still represents a considerable drain.

Further, the demand for military pilots by the airlines is expected to increase in coming years at a rate of 4 percent to 5 percent annually.4/ It is estimated that in the next 10 years the industry will need 30,000 additional pilots. The impact of the "age 60 rule" governing civilian pilot retirement is one factor exacerbating the industry's demand for pilots.5/ As Figure 1 indicates, the number of civilian pilots subject to mandatory retirement at age 60 will continue to increase through the early 1990s.

Employment in the civilian sector is not without its uncertainties. The potential for airline mergers, which are often accompanied by furloughs or staff reductions, as well as the possibility of airline strikes or failures, may create a less stable environment as compared with the military.

The key lure of the civilian sector, however, is the pay differential. Table 1 shows data on salaries for military and civilian pilots. Some pilots make much more money working for commercial airlines than they could in the military. But the data in Table 1 show that the differential varies widely according to airline and longevity. Many pilots who leave the

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3. Both the Air Force and the Navy have increased the pilot active-duty service commitment, the Air Force from six years to seven years, the Navy to six years. In addition, both services have included the following among their priority actions: reduced administrative workload; increased stability in carrying out permanent-change-of-station (PCS) moves; improved support for spouse employment; and exemption of pilots with combat skills from mandatory or DoD-imposed officer reductions.

4. Future Aviation Professionals of America (FAPA).

5. Under Federal Aviation Administration regulations, a pilot is now required to retire at age 60.

FIGURE 1. COMMERCIAL PILOT RETIREMENTS, 1981–2000

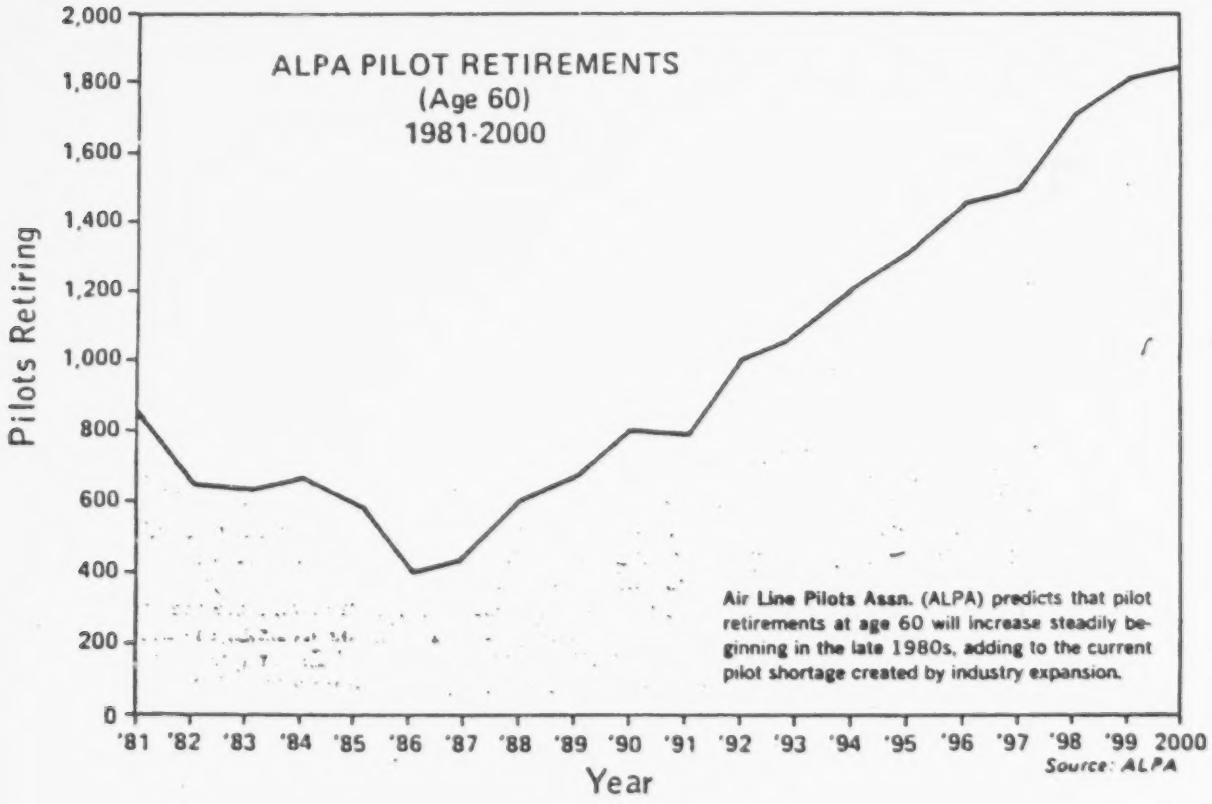

TABLE 1. PILOT COMPENSATION, MILITARY VERSUS CIVILIAN

Military Pilots

Grade and Years of Service	RMC + ACIP
0-3 with 6 years	$ 41,000
0-4 with 14 years	51,000

Civilian Airline Pilots

Civilian Airlines	Maximum 2nd Year Salary	Maximum Salary
Northwest	$ 57,540	$ 162,000
Federal Express	48,000	160,800
Piedmont	40,800	140,000
American	38,700	145,248
US Air	32,760	146,782
Delta	32,160	171,000
Eastern	27,096	121,548
United	26,400	161,976
TWA	25,200	86,900

	Average 2nd Year Salary	Overall Average
National Average	30,966	63,197
Turbojet Average	27,206	54,751
Regional Average	20,682	33,838

SOURCES: Future Aviation Professionals of America and Department of Defense.

NOTE: RMC is Regular Military Compensation. It is comprised of basic pay, quarters allowance, subsistence allowance, and the tax advantage deriving from the nontaxable status of the allowances.

military for civilian employment receive less compensation initially. The prospect of a substantially larger salary in the long term may compensate for the inital pay reduction insofar as the maximum salary offered by most major airlines far exceeds the pay that could be received in the military. It should be noted, however, that military compensation is somewhat more competitive when compared with the overall (national) average salary in the commercial sector. Moreover, military compensation is quite competitive with the average salary paid to civilian pilots of turbojets, and exceeds the average salary of pilots employed by regional airlines.

Retention Patterns

As one measure of the effects of these various reasons for leaving the military, this report employs cumulative continuation rates (CCRs). CCRs are useful in assessing trends in pilot retention. Specifically, CCRs measure the percentage of pilots entering their sixth year of service who would complete their eleventh year of service if current retention patterns remain the same. Thus, a CCR of 54 percent for pilots in the six- through eleven-year group means that out of every 100 pilots entering their sixth year of service, 54 would complete their eleventh year if current conditions continue. Table 2 shows CCRs for the Air Force from 1979 to 1987, disaggregated by weapons system.

In the Air Force, cumulative continuation rates have declined in recent years and are now at levels that vary significantly among weapons systems. The overall CCR for Air Force pilots increased through 1983 but has been declining since then and now stands at 49 percent. The Air Force maintains that it needs an overall CCR of 63 percent to meet its pilot needs. While overall rates are too low by Air Force standards, they vary widely depending on what kind of aircraft a pilot operates. The CCR for pilots operating fighter aircraft was 54 percent in 1987 compared with 74.9 percent for helicopter pilots.

Table 3 shows the cumulative continuation rates for the Navy by aircraft type. Table 3 shows the same patterns as the Air Force data, namely, that the CCRs

TABLE 2. AIR FORCE CUMULATIVE CONTINUATION RATE (CCR) BY WEAPONS SYSTEM

Weapons System	1979	1980	1981	1982	1983	1984	1985	1986	1987	Dec 1987
Fighter	36.2	52.5	61.3	74.5	80.2	79.1	68.2	63.3	55.1	54.0
Trainer	15.9	35.0	45.6	54.6	64.9	45.7	35.8	66.0	40.0	41.9
Bomber	33.3	53.3	64.0	69.7	76.1	78.7	71.9	51.2	58.5	57.1
Tanker	20.6	33.8	48.0	66.1	75.6	74.0	55.5	50.4	36.3	38.7
Strategic Airlift	17.3	35.4	44.7	64.4	73.2	63.2	41.4	40.9	31.5	30.9
Tactical Airlift	20.6	40.9	57.3	69.6	82.4	71.1	53.2	51.9	46.4	47.7
Helicopter	40.0	74.9	67.2	71.8	82.1	67.8	80.6	81.6	69.4	74.9
Overall	26.3	45.5	55.4	67.2	76.4	68.5	58.1	57.9	48.2	49.3

SOURCE: Department of Defense, U.S. Air Force.

NOTE: Numbers are for September of each year except in the final column.

TABLE 3. NAVY CUMULATIVE CONTINUATION RATE (CCR) BY AIRCRAFT TYPE

Aircraft Type	1979	1980	1981	1982	1983	1984	1985	1986	1987
Jet	10	25	39	46	43	54	29	33	36
Propeller	11	33	33	38	48	47	22	20	19
Helicopter	46	51	58	74	64	68	60	48	55
All Navy Pilots	16	35	41	49	49	54	32	32	35

SOURCE: Department of Defense, U.S. Navy.

decline over time but differ by aircraft type. The CCR for all Navy pilots increased through 1984--when it registered a high of 54 percent--and has declined since then. Recently there was a slight increase in the overall CCR (from 32 percent in 1986 to 35 percent in 1987), but the rate is still substantially lower than the 54 percent in 1984. Moreover, the Navy has indicated that it needs a CCR of 48 percent to alleviate its pilot shortage. But the rates differ significantly by type of aircraft, ranging from 55 percent for helicopter pilots to 19 percent for pilots of propeller-driven aircraft.

The Navy believes that the overall pattern of CCRs indicates the success of its AOCP bonus program, instituted in 1981. As can be seen in Table 3, the Navy's overall CCR increased from 1981 to 1984. The Navy argues that the recent decline in CCRs should not be viewed as a failure of the AOCP concept--which includes targeting of the bonus payments to those pilot specialties in short supply--but instead as a consequence of the bonus eroding in value over time because its fixed dollar amount has failed to keep pace with inflation. The buying power of an AOCP bonus of $6,000 granted today is about 22 percent less than that of the same bonus in 1981.

Current and Projected Pilot Shortages

While cumulative continuation rates provide useful insight into pilot retention, the primary impetus for the new ACP bonuses comes from current or projected shortages of pilots. Table 4 shows projections for the Air Force. The projections, which reflect service estimates, assume no new ACP bonuses. They show pilot requirements and projected inventories for pilots operating various major weapons systems. For each weapons system, total requirements are broken down into categories that the service refers to as specific and generalist.6/ Specific requirements call for a

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6. According to the Air Force, this breakdown is based upon a proportional allocation among various weapons systems. These data were initially supplied to the Congress by the Air Force, and serve as a basis for action taken by the House as

TABLE 4. AIR FORCE PILOT REQUIREMENTS AND PROJECTED PILOT INVENTORY BY MAJOR WEAPONS SYSTEM, FOR SELECTED YEARS

Major Weapons System	Requirements			Projected Inventory	Excess or Shortfall (-)
	Specific	Generalist	Total		
			1988		
Fighter	6,901	1,074	7,975	7,735	-240
Bomber	1,739	530	2,269	2,391	122
Tanker	2,715	1,060	3,775	3,724	-51
Strategic Airlift	2,599	781	3,380	3,458	78
Tactical Airlift	1,874	796	2,670	2,693	23
Helicopter	541	359	900	1,024	124
Trainer	1,455	245	1,700	1,870	170
Total	17,824	4,845	22,669	22,895	226
			1989		
Fighter	6,836	1,096	7,932	7,564	-368
Bomber	1,662	534	2,196	2,304	108
Tanker	2,735	1,054	3,789	3,705	-84
Strategic Airlift	2,605	767	3,372	3,342	-30
Tactical Airlift	1,903	784	2,687	2,558	-129
Helicopter	491	356	847	971	124
Trainer	1,468	246	1,714	1,868	154
Total	17,700	4,837	22,537	22,312	-225
			1992		
Fighter	6,664	1,206	7,870	6,971	-899
Bomber	1,459	625	2,084	1,904	-180
Tanker	2,736	1,072	3,808	3,387	-421
Strategic Airlift	2,606	830	3,436	2,929	-507
Tactical Airlift	1,852	485	2,337	2,221	-116
Helicopter	509	337	846	903	57
Trainer	1,479	246	1,725	1,782	57
Total	17,305	4,801	22,106	20,097	-2,009

SOURCE: Department of Defense, U.S. Air Force.

position to be filled by a pilot trained on that weapons system. These specific positions include, primarily, pilots for operating units. A generalist position, on the other hand, may be filled by any pilot regardless of training. Generalist positions include, for example, those involved in managing procurement of aircraft or determining budget needs.

Adding together all types of requirements and all types of weapons systems, the Air Force does not project any shortfall of pilots until 1989, when the shortage will amount to less than 2 percent of the total inventory. By 1992, however, the Air Force projects an overall shortfall of 2,009 pilots, or 10 percent. Shortages for pilots operating some types of weapons will occur earlier and be larger in percentage terms. For example, the Air Force expects to be short 240 fighter pilots in 1988. By 1992 that shortage will grow to 899 or about 13 percent of the projected inventory.

On the other hand, the Air Force expects to have enough pilots to meet its needs for billets requiring specific skills in all years and for all types of weapons systems, although it will not always be able to meet requirements that include generalist jobs. For example, the total requirement for fighter pilots in 1988 is 7,975 (6,901 specific and 1,074 generalist). Since the Air Force inventory of fighter pilots is 7,735, there are more than enough fighter pilots to satisfy the service's specific requirements but not enough to meet its total requirement including generalists. As a result, the Air Force projects an overall shortage of 240 fighter pilots.

Thus, even without new ACP bonuses, the Air Force could always fill its openings in specific jobs--that is, in operating units. In general, the Air Force attempts to meet specific requirements first and then to staff the generalist requirements with its remaining inventory. Consequently, if the pilot inventory fell short of requirements for a particular weapons system,

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well as for the analysis in this study. More recently, the Air Force has indicated that it no longer supports a proportional breakdown of requirements as shown here.

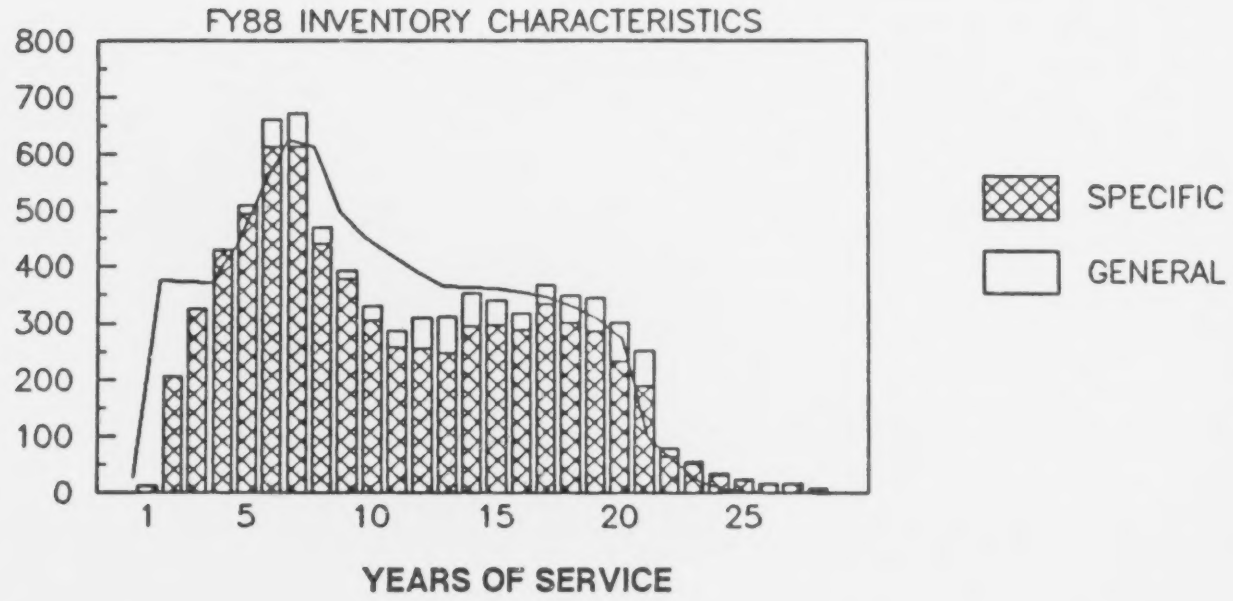
generalist billets would be left unmanned while specific billets would be filled as long as the inventory sufficed. Moreover, since generalist requirements can be satisfied by any pilot as long as it is a nonflying position, a shortage in one weapons system can be covered by pilots in another system where there is an overage. For example, in 1988 the 240 unmanned fighter pilot generalist billets might be manned by helicopter pilots.

Another approach to pilot manning involves focusing only on those pilots in years of service 8 through 14, the target population of the Air Force's proposed ACP plan. Shortages or overages can be obtained by comparing the projected inventories by year of service with the requisite objective force. Figures 2 through 6 show these comparisons for Air Force pilots in selected major weapons systems for 1988. As the figures indicate, in all cases shortages exist in the key range of 8 through 14 years of service. This approach may be misleading, however, as an estimate of the Air Force's actual overall manning situation. While it would suggest the existence of a shortage in 1988, in reality, as indicated in Table 4, the Air Force will have an excess of 226 pilots in 1988. This is because the Air Force has overages in most of its weapons systems in years of service 1 through 7 and 15 through 20 (see Figures 2 through 6). As explained earlier, the overages can be used to fill nonflying positions in short supply.

Although, in this case, focusing only on the range of 8 through 14 years of service will not yield an account of the true shortages that currently exist, it may serve the useful purpose of foretelling future shortages in weapons systems that presently have no shortfalls. A case in point is the bomber category in Figure 3.

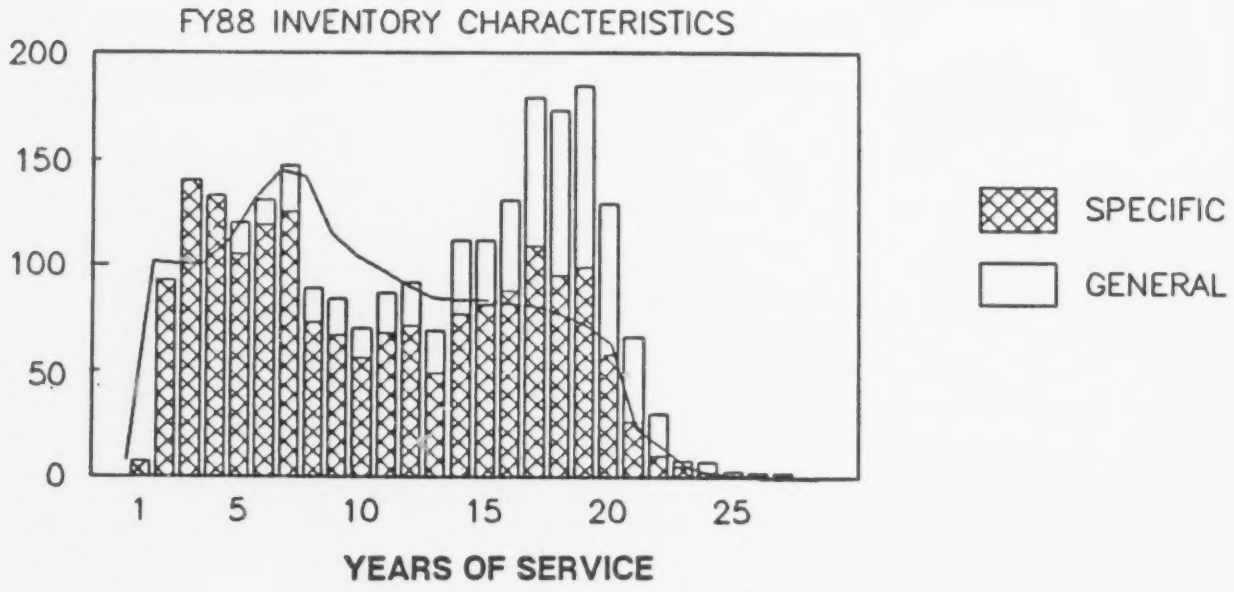
Projected shortages for the Navy will grow from 1,242 in 1988 (12 percent of its requirements) to an estimated 1,583 by 1993. As with the Air Force, these data assume no new ACP bonuses. Also like the Air Force, the Navy divides its requirements into those for flying billets (analogous to the Air Force's specific requirements) and those for nonflying billets (analogous to generalist billets). The Navy has shortages of pilots in most weapons categories, though

FIGURE 2. FIGHTER INVENTORY VS. OBJECTIVE FORCE, 1988



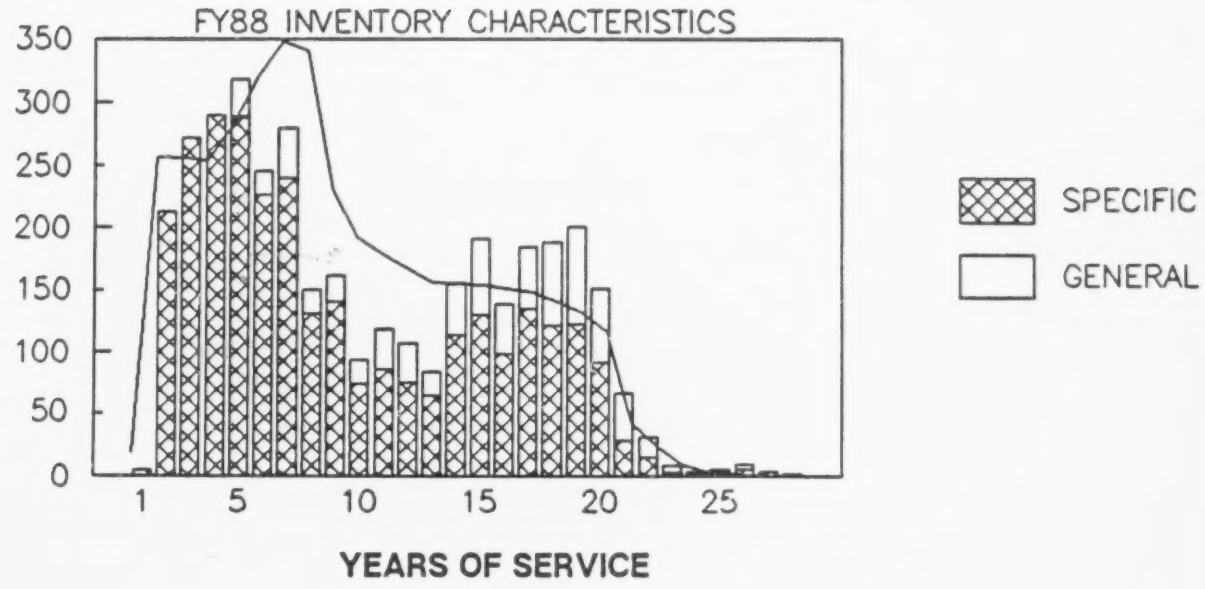
SOURCE: Department of Defense, U.S. Air Force

FIGURE 3. BOMBER INVENTORY VS. OBJECTIVE FORCE, 1988



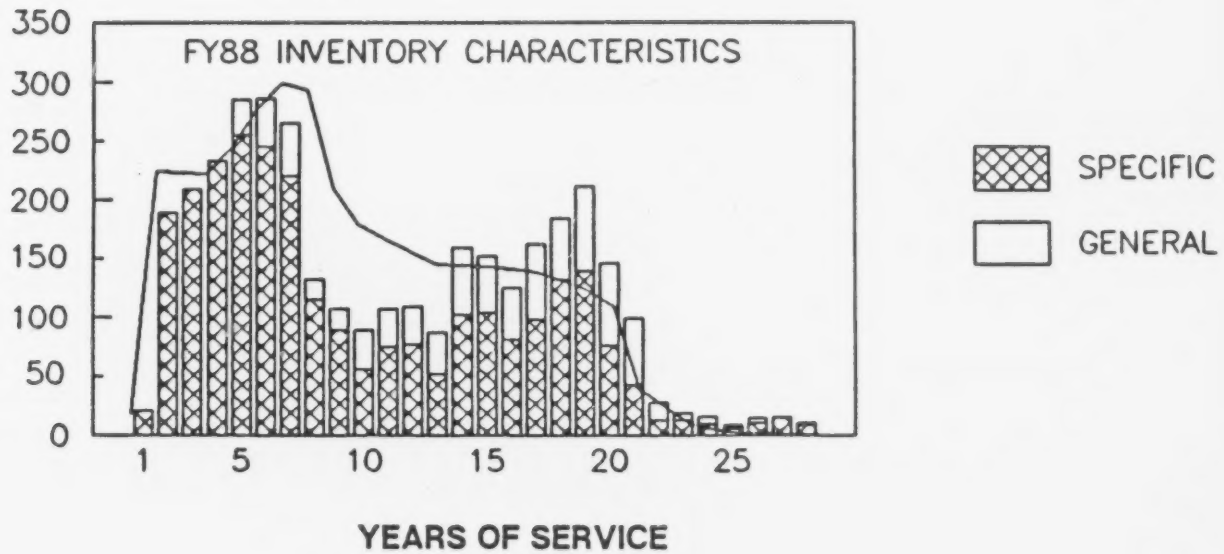
SOURCE: Department of Defense, U.S. Air Force

FIGURE 4. TANKER INVENTORY VS. OBJECTIVE FORCE, 1988



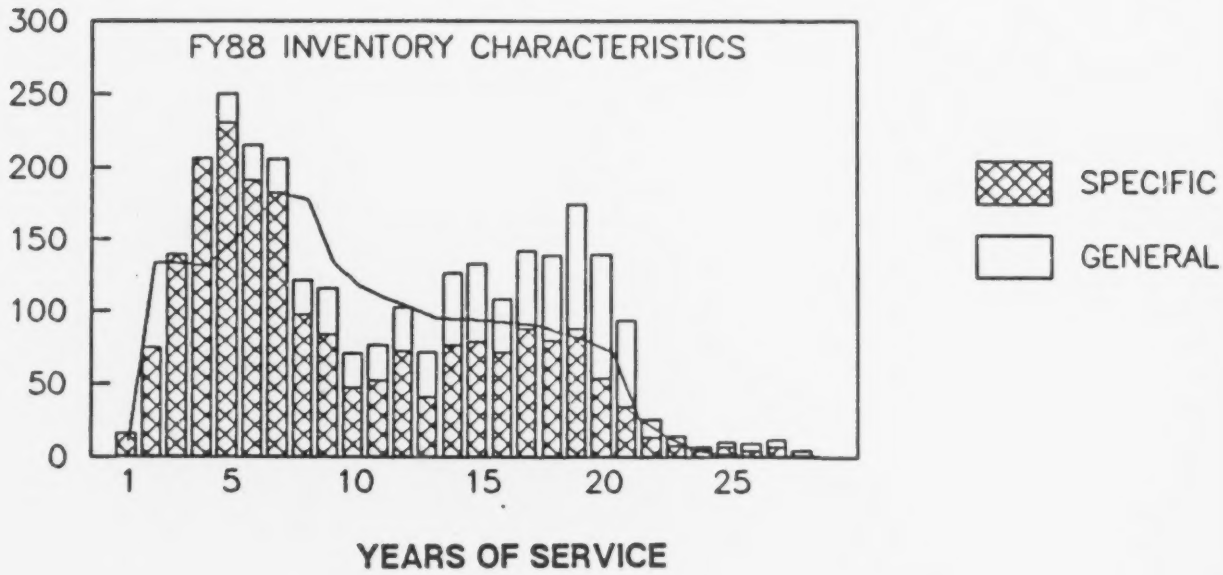
SOURCE: Department of Defense, U.S. Air Force

FIGURE 5. STRATEGIC AIRLIFT INVENTORY VS. OBJECTIVE FORCE, 1988



SOURCE: Department of Defense, U.S. Air Force

FIGURE 6. TACTICAL AIRLIFT INVENTORY VS. OBJECTIVE FORCE, 1988



SOURCE: Department of Defense, U.S. Air Force

they are larger--at least in percentage terms--in categories such as fighters. Table 5 illustrates the shortages by weapons system for 1988.

Like the Air Force, the Navy intends to focus its bonus program on a subset of its aviators. In the Navy's case, ACP would be available only to aviators in pay grades 0-3 and 0-4. (Pay grades 0-3 and 0-4, or lieutenants and lieutenant commanders, include most aviators with between 4 and about 15 years of service.) Table 6 presents data for Naval pilots in grades 0-3 and 0-4 by selected communities, including estimated excesses or shortfalls. Unlike the Air Force data, however, shortages for the Navy in pay grades 0-3 and 0-4 generally mirror the overall shortfall in pilots, as can be seen by comparing Table 5 and 6 for 1988.

Analysis of Alternative ACP Proposals

Even though Air Force pilot shortages are not yet large and should not threaten full manning of operating units, wide agreement exits that efforts should be made to offset current pilot shortfalls and avoid future ones. One approach would be a new ACP bonus. This paper analyzes two variants of the ACP approach put forward by the Administration and by the House in its 1989 defense authorization bill.

The Administration Proposal. The Administration proposes a new ACP bonus of no more than $12,000 annually. Details of who receives the bonus would be left to the Secretaries of the Navy and Air Force. (For a summary of the proposed implementation by the two services, see the accompanying box.)

The Navy has said that the new ACP bonus would replace its existing AOCP bonus. The new ACP bonus would be available only to selected aviators with 7 to 14 years of military service. An aviator would have to agree to remain in the Navy until completing 14 years of service. The amount of the bonus, if any, would depend on whether the Navy was currently short of aviators needed to operate a particular weapons system. A pilot trained to fly fighter aircraft might receive the maximum bonus if the Navy faced large shortages of

TABLE 5. NAVY PILOT REQUIREMENTS AND PROJECTED INVENTORY BY PILOT COMMUNITY, FOR 1988

Pilot Community (Aircraft)	Requirements	Projected Inventory	Excess or Shortfall (-)
Carrier-Based Electronic Warfare (EA6B)	226	151	-75
Carrier-Based Airborne Early Warning (E2C)	496	350	-146
Fighter (F-14)	989	700	-289
Carrier-Based Medium Attack (A6E)	673	483	-190
Fighter Attack (F-18)	1,268	1,009	-259
Carrier-Based Electronic Warfare (A3)	142	129	-13
Carrier-Based Antisubmarine (S3)	595	493	-102
Land-Based Electronic Warfare (EP3)	235	229	-6
Land-Based Antisubmarine Patrol (P3)	2,106	2,015	-91
Light Antisubmarine Helicopter (HSL)	1,260	1,176	-84
Mine Warfare Helicopter (HM)	197	171	-26
Strategic Communications (C-130)	325	326	1
Carrier-Based Antisubmarine Helicopter (HS)	762	775	13
Composite Helicopter Vertical Replenishment (HC)	956	981	25
Total	10,230	8,988	-1,242

SOURCE: Department of Defense, U.S. Navy.

TABLE 6. NAVY PILOT REQUIREMENTS AND SELECTED INVENTORY OF 0-3 AND 0-4 AVIATORS BY SELECTED COMMUNITY, FOR SELECTED YEARS

Pilot Community (Aircraft)	Requirements			Projected Inventory	Excess or Shortfall (-)
	Flying Billet	Nonflying Billet	Total		
		1988			
Carrier-Based Electronic Warfare (EA6B)	74	88	162	79	-83
Carrier-Based Airborne Early Warning (E2C)	124	191	315	165	-150
Fighter (F-14)	438	310	748	428	-320
Carrier-Based Medium Attack (A6E)	196	270	466	268	-198
Fighter Attack (F-18)	465	463	928	643	-285
Carrier-Based Electronic Warfare (A3)	38	10	48	34	-14
Carrier-Based Antisubmarine (S3)	200	173	373	270	-103
Land-Based Electronic Warfare (EP3)	54	17	71	64	-7
Land-Based Antisubmarine Patrol (P3)	852	416	1,268	1,169	-99
Light Antisubmarine Helicopter (HSL)	576	162	738	645	-93
Mine Warfare Helicopter (HM)	113	68	181	164	-17
Strategic Communications (C-130)	59	31	90	135	45
Carrier-Based Antisubmarine Helicopter (HS)	287	99	386	462	76
Composite Helicopter Vertical Replenishment (HC)	208	57	265	356	91
Total	3,684	2,355	6,039	4,882	-1,157
		1989			
Carrier-Based Electronic Warfare (EA6B)	74	88	162	81	-81
Carrier-Based Airborne Early Warning (E2C)	124	191	315	163	-152
Fighter (F-14)	438	310	748	422	-326
Carrier-Based Medium Attack (A6E)	196	270	466	264	-202
Fighter Attack (F-18)	465	463	928	631	-297
Carrier-Based Electronic Warfare (A3)	38	10	48	34	-14
Carrier-Based Antisubmarine (S3)	200	173	373	267	-106
Land-Based Electronic Warfare (EP3)	54	17	71	61	-10

(Cont'd)

TABLE 6. (Continued)

Pilot Community (Aircraft)	Requirements: Flying Billet	Requirements: Nonflying Billet	Requirements: Total	Projected Inventory	Excess or Shortfall (-)
		1989			
Land-Based Antisubmarine Patrol (P3)	852	416	1,268	1,158	-110
Light Antisubmarine Helicopter (HSL)	576	162	738	667	-71
Mine Warfare Helicopter (HM)	113	68	181	164	-17
Strategic Communications (C-130)	59	31	90	129	39
Carrier-Based Antisubmarine Helicopter (HS)	287	99	386	457	71
Composite Helicopter Vertical Replenishment (HC)	208	57	265	341	76
Total	3,684	2,355	6,039	4,839	-1,200
		1993			
Carrier-Based Electronic Warfare (EA6B)	74	88	162	79	-83
Carrier-Based Airborne Early Warning (E2C)	124	191	315	144	-171
Fighter (F-14)	438	310	748	403	-345
Carrier-Based Medium Attack (A6E)	196	270	466	270	-196
Fighter Attack (F-18)	465	463	928	579	-349
Carrier-Based Electronic Warfare (A3)	38	10	48	31	-17
Carrier-Based Antisubmarine (S3)	200	173	373	262	-111
Land-Based Electronic Warfare (EP3)	54	17	71	58	-13
Land-Based Antisubmarine Patrol (P3)	852	416	1,268	1,111	-157
Light Antisubmarine Helicopter (HSL)	576	162	738	742	4
Mine Warfare Helicopter (HM)	113	68	181	174	-7
Strategic Communications (C-130)	59	31	90	107	17
Carrier-Based Antisubmarine Helicopter (HS)	287	99	386	397	11
Composite Helicopter Vertical Replenishment (HC)	208	57	265	282	17
Total	3,684	2,355	6,039	4,639	-1,400

SOURCE: Department of Defense, U.S. Navy.

BOX

SERVICES' IMPLEMENTATION OF PROPOSED ACP BONUS

Navy

Pilots/NFOs in a community having shortages

7-14 years of service

Two contract options

- Short-term (1-2 years) for pilots through 2nd tour
- Long-term through 14 years of service

Maximum annual payment of $12,000

- Actual payments would be based on specific community shortages

Conversion from AOCP

Air Force

Fixed-wing pilots only

- No helicopter pilots
- No navigators

8-14 years of service

One contract option per individual

- Based on number of years remaining to 14 years of service

Maximum payment of $12,000

- Reduced payment schedule for entrants past 8th year of service

Two-year transition program

fighter pilots. A pilot trained to operate an aircraft for which the Navy had enough pilots would not receive a bonus. Pilots trained to operate weapons with moderate shortages would receive bonuses, but less than the maximum of $12,000.

The Air Force proposes different criteria for its program. Table 7 presents the Air Force's estimate of its proposed ACP program.7/ The ACP bonus would be available to all Air Force pilots of fixed-wing aircraft (excluding helicopter pilots and navigators) who had completed 8 to 14 years of service. Any pilot who met these tests could receive an annual bonus regardless of whether there was a shortage of pilots trained to operate that weapons system. Nor would the amount of the bonus depend on the size of the shortfall; it would be based on the number of years remaining before the pilot completed 14 years of service. A pilot with six years remaining would receive the maximum bonus of $12,000; a pilot with five years would receive $11,000; and so on (see Table 7).

The Administration has estimated that, using this approach, the Air Force would pay the new ACP bonus to 5,212 pilots in 1989. Total cost for the Air Force portion of the ACP would amount to $57.9 million in 1989.

The Administration argues that this level of bonuses would alleviate future pilot shortfalls in the Air Force but not eliminate them entirely. The Air Force would still have a shortfall by 1992 of about 1,200 pilots, compared with a shortfall of about 2,000 without the new bonuses.

The House Plan. The fiscal year 1989 defense authorization bill passed by the House of Representatives stipulates that the Air Force must target ACP in the same manner as proposed by the Navy. The Air Force would pay a bonus only to those pilots operating weapons systems for which shortages currently exist, and the amount of the bonus would be scaled in

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7. The estimate is based on an Air Force inventory model and on the results of a survey conducted by the Air Force.

TABLE 7. AIR FORCE ESTIMATE OF ACP PROGRAM BY WEAPONS SYSTEM FOR 1989

	YEARS OF SERVICE (YOS)								
	8	9	10	11	12	13	14	15	16
Fighter									
Eligible	607	481	383	354	325	279	300	355	350
Number taken	431	361	311	300	289	260	290	349	343
Bomber									
Eligible	138	94	73	70	73	86	88	87	99
Number taken	97	76	62	63	67	79	83	86	97
Tanker									
Eligible	259	196	118	143	93	118	97	109	165
Number taken	172	135	101	123	80	110	95	103	160
Strategic Airlift									
Eligible	264	198	122	95	92	116	110	96	157
Number taken	152	143	96	82	79	108	109	93	154
Tactical Airlift									
Eligible	227	142	106	101	68	77	93	104	126
Number taken	158	114	86	88	55	73	91	99	122
Trainer									
Eligible	109	38	18	11	25	21	37	16	52
Number taken	61	31	15	10	21	19	36	15	50
Totals									
Eligible	1,604	1,148	819	775	676	697	725	767	948
Number taken	1,070	860	671	666	591	650	704	745	927
Payment (in thousands)	$ 12	11	11	9.5	8	6.5	6.5	5	5
Cost (millions)	$12.9	9.5	7.4	6.3	4.7	4.2	4.6	3.7	4.6

Total Eligible (8-14 YOS): 6,444
Total Number Taken (8-14 YOS): 5,212
Total Cost: $57.9 Million

SOURCE: Department of Defense, U.S. Air Force.

accordance with the degree of the shortfall among weapons systems. Under this House approach, Air Force projections for 1989 show that only four categories of pilot communities would be eligible for bonuses (see Table 4).

The House plan does not detail the exact levels of bonuses to be paid depending on the size of shortfalls. To estimate the cost of the House plan, the Congressional Budget Office assumed that fighter pilots, whose community has the most severe projected shortage, would be eligible for maximum annual bonuses of $12,000. Pilots in the tactical air lift, tanker, and strategic airlift communities would be offered smaller maximum annual bonuses of $10,000, $8,000 and $6,000, respectively. The $2,000 differential among the weapons systems is consistent with the Navy's approach. Pilots in other communities would not be eligible for bonuses.

The details of the costs associated with this option are shown in Table 8. Using Air Force data (reflected in Table 7), the table shows the number of pilots eligible for the bonus in years of service 8 through 16 by weapons system.8/ The projected numbers of pilots who would accept the offered bonuses are derived from the Air Force's estimates, reduced proportionately in accordance with the targeted pay scale of this option. For example, the Air Force estimates that 158 tactical airlift pilots in their 8th year of service would agree to the contract terms of the ACP program with an annual payment of $12,000 (see Table 7). Under the House plan, however, tactical airlift pilots in the 8th year of service would only be paid $10,000 annually. If their acceptance rate declined proportionately, only 132 would accept the ACP program under the alternative option.

The estimated total cost of the House plan in

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8. The main focus of ACP is on pilots in years of service 8 through 14. However, since it will be a new program for the Air Force, it will have to be phased in gradually. Rated pilots in years of service 15 and 16 who meet the eligibility criteria and receive a bonus are part of a two-year transition program.

TABLE 8. ESTIMATED COSTS OF THE HOUSE PLAN, BY TYPE OF AIR FORCE PILOT

Fighter Pilots
Max Pmt = $12,000
Pmt $ in thousands Cost $ in millions

YOS	Elig	Take	Pmt	Cost
8	607	431	$12.0	$5.2
9	481	361	$11.0	$4.0
10	383	311	$11.0	$3.4
11	354	300	$9.5	$2.9
12	325	289	$8.0	$2.3
13	279	260	$6.5	$1.7
14	300	290	$6.5	$1.9
15	355	349	$5.0	$1.7
16	350	343	$5.0	$1.7
Total Cost				$24.8

Tactical Airlift Pilots
Max Pmt = $10,000
Pmt $ in thousands Cost $ in millions

YOS	Elig	Take	Pmt	Cost
8	227	132	$10.0	$1.3
9	142	95	$9.2	$0.9
10	106	72	$9.2	$0.7
11	101	73	$7.9	$0.6
12	68	46	$6.7	$0.3
13	77	61	$5.4	$0.3
14	93	76	$5.4	$0.4
15	104	83	$4.2	$0.3
16	126	102	$4.2	$0.4
Total Cost				$5.2

Tanker Pilots
Max Pmt = $8,000
Pmt $ in thousands Cost $ in millions

YOS	Elig	Take	Pmt	Cost
8	259	115	$8.0	$0.9
9	196	90	$7.3	$0.7
10	118	67	$7.3	$0.5
11	143	82	$6.3	$0.5
12	93	53	$5.3	$0.3
13	118	73	$4.3	$0.3
14	97	63	$4.3	$0.3
15	109	69	$3.3	$0.2
16	165	107	$3.3	$0.4
Total Cost				$4.1

Strategic Airlift Pilots
Max Pmt = $6,000
Pmt $ in thousands Cost $ in millions

YOS	Elig	Take	Pmt	Cost
8	264	76	$6.0	$0.5
9	198	72	$5.5	$0.4
10	122	48	$5.5	$0.3
11	95	41	$4.8	$0.2
12	92	40	$4.0	$0.2
13	116	54	$3.3	$0.2
14	110	55	$3.3	$0.2
15	96	47	$2.5	$0.1
16	157	77	$2.5	$0.2
Total Cost				$2.1

All Pilots
Cost $ in millions

YOS	Elig	Take	Cost
8	1357	753	$7.9
9	1017	618	$5.9
10	729	498	$4.8
11	693	496	$4.1
12	578	428	$3.1
13	590	448	$2.5
14	600	484	$2.7
15	664	547	$2.4
16	798	628	$2.7
Total Cost			$36.2

fiscal year 1989 would be $36.2 million; this sum would be paid to a projected 4,900 pilots. In comparison, the Air Force proposal would cost $57.9 million, to be paid to an estimated 5,212 pilots. Considering all those categories of pilots that experience shortfalls, the House plan should reduce the shortfall by roughly the same amount as the Administration plan. The Administration plan would cost more primarily because it would offer bonuses to some categories of pilots that do not currently experience shortfalls, while also paying other pilots in less severe shortage categories more than called for under the House plan.

Under the House plan the largest bonuses would be paid to fighter pilots, the community with the greatest pilot shortage. Since fighter pilots are also the largest community, under the House plan they would receive nearly 70 percent of all bonus payments. The Administration proposal would pay fighter pilots the same amounts both individually and in total as the House plan. But because greater bonuses would be offered in other weapons system communities, fighter pilots would receive only 42 percent of all payments.

Other Advantages and Disadvantages of the House Plan. Cost is a major factor distinguishing the Administration proposal from the House plan. But there are also other differences.

Disadvantages of the House Plan. In informal discussions, Air Force representatives have taken exception to the extensive targeting called for in the House plan, mainly on the grounds that it is inequitable. The concern expressed by the Air Force is that, to the greatest extent possible, everyone whose life is "on the line" while in combat should receive a bonus of the same amount. It contends that deviation from such a policy of equality would create morale problems, and these in turn would exacerbate current and projected shortages of pilots.

In addition, the Air Force maintains that by limiting the bonuses to pilots in weapons systems in which current shortages exist, the House plan overlooks those in which shortfalls are projected to occur. In particular, it ignores the small cohorts in years of service 8 through 14 in the bomber category

which, over time, will lead to shortages in this weapons system.

Advantages of the House Plan. The House plan offers several advantages. Most important, perhaps, is that it addresses the needs of the Air Force in shortage areas, while holding down costs. In addition, it would apply to the Air Force an approach that the Navy has found to be effective in managing its existing AOCP bonus. Moreover, Air Force and Navy pilots would receive their new ACP bonuses on the basis of similar criteria. Finally, the targeting proposed in the House plan has ample precedent in other Department of Defense programs such as special and incentive pays for physicians, the Variable Housing Allowance (VHA), and enlisted recruiting and reenlistment bonuses.